

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA**

BAYERISCHE MOTOREN WERKE AG, and  
ROBERT BOSCH GMBH,

Plaintiffs,

V.

FORAS TECHNOLOGIES LTD.,

Defendant.

Case No.

## JURY TRIAL DEMANDED

## COMPLAINT

Plaintiffs Bayerische Motoren Werke AG (“BMW”) and Robert Bosch GmbH (“Bosch”) (collectively, “Plaintiffs”), by and through their undersigned counsel, file this Complaint and Jury Demand against Defendant Foras Technologies Limited (“Defendant”), and allege as follows:

## NATURE OF THE ACTION

1. This is an action for declaratory judgment of noninfringement and invalidity of a United States Patent pursuant to the Declaratory Judgment Act, 28 U.S.C. §§ 2201-2202, and the Patent Laws of the United States, 35 U.S.C. §§ 1 *et seq.*

2. Plaintiffs seek declaratory judgment that none of the claims of U.S. Patent No. 7,502,958 (the “’958 Patent”) are infringed by Bosch products (containing Infineon TriCore TC29XX chipsets) included in certain BMW branded vehicles, and thus none of the claims of ’958 Patent are infringed by the certain BMW branded vehicles incorporating the Bosch products. Plaintiffs further seek declaratory judgment that each of the claims of the ’958 Patent is

invalid under one or more subsections of the Patent Laws of the United States, 35 U.S.C. §§ 1 *et seq.*

3. Plaintiffs seek this relief because Defendant has sued Plaintiffs alleging that they have infringed the '958 Patent by making, using, offering for sale, selling, and/or importing certain BMW branded vehicles that incorporate a Bosch product (containing Infineon TriCore TC29XX chipsets) that allegedly infringing one or more claims of the '958 patent. Defendant's lawsuit has placed a cloud over Bosch's continuing manufacture and sale of the allegedly infringing Bosch product and BMW's continuing manufacture and sale of the allegedly infringing BMW branded vehicles, thereby creating an actual and justiciable controversy between Plaintiffs and Defendant.

#### **NATURE OF THE ACTION**

4. Plaintiff Bayerische Motoren Werke AG is a company organized and existing under the laws of Germany and maintains its principal place of business at Petuelring 130, 80809, Munich, Germany.

5. Plaintiff Robert Bosch GmbH is a company organized and existing under the laws of Germany and maintains its principal place of business at Robert-Bosch-Platz 1, 70839, Gerlingen, Germany.

6. On information and belief, Defendant Foras Technologies Limited is a company organized and existing under the laws of Ireland and having a principle place of business at The Hyde Building, Suite 23, The Park, Carrickmines, Dublin 18, Ireland.

## **JURISDICTION AND VENUE**

7. The Court has subject matter jurisdiction over this action pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201, 2202, 1331, and 1338; and the Patent Laws of the United States, 35 U.S.C. §§ 1 *et seq.*

8. The Court has personal jurisdiction over Defendant pursuant to 35 U.S.C. § 293, which provides that, in cases involving a “patentee not residing in the United States,” this Court “shall have the same jurisdiction to take any action respecting the patent or rights thereunder that it would have if the patentee were personally within the jurisdiction of the court.”

9. Upon information and belief, Defendant is the owner of all rights, title, and interest of the '958 Patent at the United States Patent and Trademark Office. Upon information and belief, Defendant is an Irish resident and citizen, and as such, is a “patentee not residing in the United States” under 35 U.S.C. § 293. Upon information and belief, Defendant has not filed with the United States Patent and Trademark Office “a written designation stating the name and address of a person residing within the United States on whom may be served process or notice of proceedings affecting the patent or rights thereunder.” 35 U.S.C. § 293. Thus, Defendant is subject to this Court’s personal jurisdiction under 35 U.S.C. § 293.

10. Venue is proper in this judicial district under 28 U.S.C. § 1391(b)(3) because Defendant is subject to this Court’s personal jurisdiction under 35 U.S.C. § 293. Venue is also proper under 28 U.S.C. § 1391(c)(3) because a defendant that does not reside in the United States may be sued in any judicial district.

## **BACKGROUND**

11. The '958 Patent bears the title “System and Method for Providing Firmware Recoverable Lockstep Protection,” and states that it issued on March 10, 2009. The '958 Patent

identifies Scott L. Michaelis, Anurupa Rajkumari, and William B. McHardy as the inventors. A copy of the '958 Patent is attached as Exhibit 1.

12. The '958 Patent lists “Hewlett-Packard Development Company, L.P.” as the original assignee. The United States Patent and Trademark Office Assignment Database contains a record of an assignment of the '958 Patent from Hewlett-Packard Development Company, L.P. to Hewlett Packard Enterprise Development LP executed October 27, 2015, and recorded November 9, 2015 at Reel/frame 037079/0001, from Hewlett Packard Enterprise Development LP to Sonrai Memory, Ltd., executed April 23, 2020, and recorded May 5, 2020 at Reel/frame 052567/0734, and Sonrai Memory, Ltd. to Defendant executed January 19, 2022, and recorded February 11, 2022 at Reel/frame 058992/0571.

13. The '958 Patent issued with twenty-five claims. Claims 1, 13, 19, and 23 are all independent claims.

#### **DEFENDANT’S LAWSUIT AGAINST PLAINTIFFS**

14. On May 19, 2023, Defendant filed a complaint for patent infringement against BMW and Bosch in the United States District Court for the Western District of Texas (Civil Action No. 6:23-cv-00386) (“the -386 lawsuit”) alleging infringement of the '958 Patent. A copy of the complaint is attached as Exhibit 2.

15. Bosch manufactures and sells Bosch electronic control units containing the TriCore TC29XX chipsets in Germany. Defendant alleges in its complaint that BMW branded automobiles BMW X3, X4, and X5 (the “Accused Products”) include the Bosch electronic control units. BMW designs the BMW X3, X4, and X5 in Germany. Plaintiffs do not design or manufacture the TriCore TC29XX chipsets. On information and belief, the TriCore TC29XX

chipsets are manufactured by Infineon Technologies Americas Corp. and/or its foreign affiliates (“Infineon”).

16. Defendant alleges in its complaint that it “is the sole owner by assignment of all right, title, and interest in” the ’958 Patent. Ex. 2 at ¶ 2.

17. Defendant’s allegations of infringement of the ’958 Patent are based on the alleged making, using, offering for sale, selling, and/or importing of the BMW X3, X4, and X5, which Defendant alleges include a Bosch electronic control unit containing Infineon TriCore TC29XX chipsets. Ex. 2 at ¶ 17.

18. Defendant alleges in its complaint that the “Accused Products satisfy all claim limitations of one or more claims of the ’958 Patent” and attaches a “claim chart comparing exemplary independent claim 19 of the ’958 Patent to representative Accused Products” to its complaint. Ex. 2 at ¶ 18. Both the complaint and attached claim chart allege that Bosch electronic control units that contain Infineon TriCore TC29XX chipsets infringe claim 19. Ex. 2 at ¶¶ 4, 17; Ex. 3.

19. In the -386 lawsuit, Defendant’s preliminary infringement contentions are due March 14, 2024.

20. BMW has designed and continues to design the allegedly infringing BMW X3, X4, and X5. Bosch has manufactured and/or sold and continues to manufacture and/or sell the allegedly infringing Bosch electronic control units containing the Infineon TriCore TC29XX chipsets. Therefore, Plaintiffs have a reasonable apprehension that Defendant may file an action against Plaintiffs and allege that Plaintiffs have infringed or are infringing the ’958 Patent by making, using, offering for sale, selling, and/or importing of those products. Indeed, Defendant has sued Plaintiffs in the United States District Court for the Western District of Texas.

However, the Western District of Texas lacks personal jurisdiction over Plaintiffs, which are foreign entities that do not perform any allegedly infringing acts within the State of Texas. *See* Exs. 4 and 5 (BMW and Bosch's Motions to Dismiss in the -386 lawsuit).

21. Bosch's allegedly infringing products containing Infineon TriCore TC29XX chipsets do not infringe and have not infringed, either directly or indirectly, any claim of the '958 Patent. Accordingly, BMW's allegedly infringing vehicles incorporating the Bosch products do not infringe and have not infringed, either directly or indirectly, any claim of the '958 Patent. In view of Defendant's allegations that Bosch electronic control units (containing Infineon TriCore TC29XX chipsets) and BMW's vehicles incorporating the Bosch electronic control units infringe one or more claims of the '958 Patent, and its patent infringement claims against BMW's automotive vehicles incorporating the Bosch electronic control units, a substantial controversy exists between the parties that is of sufficient immediacy and reality to warrant declaratory relief.

### **FIRST CAUSE OF ACTION**

#### **(Declaratory Judgment of Non-Infringement)**

22. Plaintiffs reallege and incorporate paragraphs 1 to 21 as if fully set forth herein.

23. An actual controversy exists with respect to the '958 Patent due at least to Defendant's assertion that Plaintiffs infringe one or more claims of the '958 Patent, including independent claim 19, through their making, using, offering for sale, selling, and/or importing of the BMW X3, X4, and X5 that allegedly include Bosch products (containing the Infineon TriCore TC29XX chipsets). Defendant's wrongful assertion of the '958 Patent against Plaintiffs has caused and will continue to cause Plaintiffs irreparable injury and damage.

24. On information and belief, Bosch electronic control units containing the Infineon TriCore TC29XX chipsets do not practice or include all of the claimed elements of the '958

Patent, including claim 19, which Foras asserts as an exemplary independent claim of the '958 Patent in its complaint. Ex. 2 at ¶ 18.

25. On information and belief, Bosch electronic control units containing the Infineon TriCore TC29XX chipsets do not include “firmware code . . . for determining if the lockstep is recoverable for the pair of lockstep processors,” as required by claim 19 of the '958 Patent.

26. On information and belief, Bosch electronic control units containing the Infineon TriCore TC29XX chipsets do not include “firmware code for determining if a lockstep mismatch has occurred between the pair of lockstep processors,” as required by claim 19 of the '958 Patent.

27. On information and belief, Bosch electronic control units containing the Infineon TriCore TC29XX chipsets do not include “firmware code, responsive to determining that the lockstep is recoverable, for triggering an operating system to idle the processors, attempting to recover lockstep between the pair of processors,” as required by claim 19 of the '958 Patent.

28. On information and belief, Bosch electronic control units containing the Infineon TriCore TC29XX chipsets do not include “firmware code for . . . triggering said operating system to recognize the processors as being available for receiving instructions,” as required by claim 19 of the '958 Patent.

29. Because Bosch electronic control units containing the Infineon TriCore TC29XX chipsets do not meet each and every limitation of claims of the '958 Patent, Bosch electronic control units and BMW's vehicles allegedly incorporating the Bosch electronic control units do not infringe, directly or indirectly, any claim of the '958 Patent, either literally or under the doctrine of equivalents.

30. Plaintiffs reserve the right to assert additional non-infringement grounds, especially as to any newly asserted claims of the '958 Patent in addition to independent claim 19.

31. In view of the foregoing, Plaintiffs seek and are entitled to declaratory judgment that Bosch products containing the Infineon TriCore TC29XX chipset do not infringe any claim of the '958 Patent, and as a result, none of the acts of making, using, offering for sale, selling, and/or importing of BMW's vehicles allegedly incorporating the Bosch products infringe any claim of the '958 Patent. A judicial determination of the respective rights of the parties with respect to noninfringement of the claims of the '958 Patent is necessary and appropriate under 28 U.S.C. § 2201 to resolve the parties' dispute regarding alleged infringement of the '958 Patent.

## **SECOND CAUSE OF ACTION**

### **(Declaratory Judgment of Invalidity)**

32. Plaintiffs reallege and incorporate paragraphs 1 to 31 as if fully set forth herein.

33. An actual controversy exists with respect to the '958 Patent due at least to Defendant's assertion that Plaintiffs infringe one or more claims of the '958 Patent, including independent claim 19, through their making, using, offering for sale, selling, and/or importing of the allegedly infringing BMW vehicles that allegedly include Bosch products (containing the Infineon TriCore TC29XX chipsets). Defendant's wrongful assertion of the '958 Patent against Plaintiffs has caused and will continue to cause Plaintiffs irreparable injury and damage.

34. Each claim of the '958 Patent is invalid for failure to satisfy one or more conditions for patentability set forth in 35 U.S.C. § 101 *et seq.*, including but not limited to Sections 101, 102, 103, and 112.



35. For example, each claim of the '958 Patent is invalid under 35 U.S.C. §§ 102 and/or 103 based on at least the following references (each of which is prior art to the '958 Patent), or combinations thereof:

- U.S. Patent No. 5,748,873 to Ohguro et al. ("Ohguro")
- U.S. Patent No. 5,954,742 to Williams ("Williams")
- U.S. Patent No. 6,058,491 to Bossen et al. ("Bossen")
- U.S. Patent No. 6,393,582 to Klecka et al. ("Klecka")
- U.S. Patent No. 6,625,749 to Quach ("Quach")
- U.S. Patent No. 7,085,959 to Safford ("Safford")
- U.S. Patent No. 7,107,484 to Yamazaki et al. ("Yamazaki")
- U.S. Patent No. 7,502,958 to Nguyen et al. ("Nguyen")
- U.S. Patent Application Publication No. 2002/0144177 to Kondo et al. ("Kondo")
- U.S. Patent Application Publication No. 2003/0028746 to Durrant ("Durrant")
- U.S. Patent Application Publication No. 2003/0051190 to Marisetty et al. ("Marisetty")
- U.S. Patent Application Publication No. 2003/0126142 to Tu et al. ("Tu")
- U.S. Patent Application Publication No. 2003/0126498 to Bigbee et al. ("Bigbee")
- Japanese Patent Application Publication No. H06-2429791 to Akai ("Akai")
- Terayama, F., Korematsu, J., Kitamura, F., Hinata, J., & Enomoto, T. (1993, May). Self-checking and recovering microprocessor G100FTS for fault-tolerant systems. In Proceedings of IEEE Custom Integrated Circuits Conference-CICC'93 (pp. 4.2.1–4.2.4) IEEE ("Terayama")

36. Plaintiffs hereby incorporate and assert each and every ground asserted in the Initial Invalidity and Subject Matter Eligibility Contentions served in *Foras Technologies Ltd. v. Kia Corporation et al.*, Case No. 2:23-cv-00219-JRG (the “Kia case”), which are attached hereto as Exhibit 6 (Kia’s Initial Invalidity and Subject Matter Eligibility Contentions and its attachment A and exhibits A-N in the Kia case).

37. For example, claims 1, 2, 3, 6, 8, 19, and 20 of the ’958 Patent are invalid under 35 U.S.C. § 102 and/or 35 U.S.C. § 103 because each of the above prior art references anticipates and/or renders obvious the claims of the ’958 Patent.

38. Additionally and/or alternatively, claims 1, 2, 3, 6, 8, 19, and 20 of the ’958 Patent are invalid under 35 U.S.C. § 103 based on combinations of the above prior art references in the manner identified in the Initial Invalidity and Subject Matter Eligibility Contentions in the Kia case. Ex. 6.

39. Plaintiffs hereby incorporate and assert each and every ground asserted in the Petition for Inter Partes review filed in IPR2023-01373 by BMW of North America, LLC and Robert Bosch LLC on September 8, 2023, which is attached hereto as Exhibit 7.

40. For example, claims 1–8 and 13–22 of the ’958 Patent are invalid under 35 U.S.C. § 103 based on Bigbee in combination with Nguyen, which together disclose each and every element of claims 1–8 and 13–22 of the ’958 Patent. Ex. 7.

41. Plaintiffs reserve the right to assert additional invalidity grounds, especially as to any newly added claims of the ’958 Patent.

42. In view of the foregoing, Plaintiffs seek and are entitled to declaratory judgment that claims of the ’958 Patent are invalid and unenforceable. A judicial determination of the respective rights of the parties with respect to the invalidity of the claims of the ’958 Patent is

necessary and appropriate under 28 U.S.C. § 2201 to resolve the parties dispute regarding the '958 Patent.

### **PRAYER FOR RELIEF**

**WHEREFORE**, Plaintiffs demand judgment as follows:

- A. Declaratory judgment that Plaintiffs' use of third-party Infineon TriCore TC29XX chipsets does not infringe and has not infringed, directly, or indirectly, any claim of the '958 Patent, either literally or under the doctrine of equivalents;
  - B. Declaratory judgment that the claims of the '958 Patent are invalid;
  - C. Preliminary and permanent injunctive relief restraining Defendant and its agents, servants, employees, successors and assigns, and all others in concert and privity with them from wrongfully asserting the '958 Patent against Plaintiffs' products;
  - D. A declaration that this action is an exceptional case under 35 U.S.C. § 285;
  - E. An award to Plaintiffs of their attorneys' fees and costs incurred in this Action;
- and
- F. A grant of such other and further relief as this Court deems just and proper.

### **DEMAND FOR JURY TRIAL**

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiffs demand a trial by jury on all issues so triable.

Dated: March 6, 2024

Respectfully submitted,

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